

# Occupational HIV Transmission and Prevention among Health Care Workers

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## Fast Facts

- Occupational transmission of HIV to health care workers is extremely rare.
- CDC recommends proper use of safety devices and barriers to prevent exposure to HIV in the health care setting.
- For workers who are exposed, CDC has developed recommendations to minimize the risk of developing HIV.

Only 58 cases of confirmed occupational transmission of HIV to health care workers have occurred in the United States. The proper use of gloves and goggles, along with safety devices to prevent injuries from sharp medical devices, can help minimize the risk of exposure to HIV in the course of caring for patients with HIV. When workers are exposed, the Centers for Disease Control and Prevention (CDC) recommends immediate treatment with a short course of antiretroviral drugs to prevent infection.

## The Numbers

As of December 31, 2013, 58 confirmed occupational transmissions of HIV and 150 possible transmissions had been reported in the United States. Of these, only one confirmed case has been reported since 1999. Underreporting of cases to CDC is possible, however, because case reporting is voluntary.

Health care workers who are exposed to a needlestick involving HIV-infected blood at work have a 0.23% risk of becoming infected. In other words, 2.3 of every 1,000 such injuries, if untreated, will result in infection. Risk of exposure due to splashes with body fluids is thought to be near zero even if the fluids are overtly bloody. Fluid splashes to intact skin or mucous membranes are considered to be extremely low risk of HIV transmission, whether or not blood is involved.

## Prevention Strategies

To prevent transmission of HIV to health care workers in the workplace, health care workers must assume that blood and other body fluids from all patients are potentially infectious. They should therefore follow these infection control precautions at all times:

- Routinely use barriers (such as gloves and/or goggles) when anticipating contact with blood or body fluids.
- Immediately wash hands and other skin surfaces after contact with blood or body fluids.
- Carefully handle and dispose of sharp instruments during and after use.

Safety devices have been developed to help prevent needlestick injuries. If used properly, these types of devices may reduce the risk of exposure to HIV. Many percutaneous injuries, such as needlesticks and cuts, are related to the disposal of sharp-ended medical devices. All used syringes or other sharp instruments should be routinely placed in “sharps” containers for proper disposal to prevent accidental injuries and risk of HIV transmission.

Although the most important strategy for reducing the risk of occupational HIV transmission is to prevent occupational exposures, plans for postexposure management of health care personnel should be in place. CDC issued updated guidelines in 2013 for the management of health care worker exposures to HIV and recommendations for postexposure prophylaxis (PEP): *Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis*. ([www.ncbi.nlm.nih.gov/pubmed/23917901](http://www.ncbi.nlm.nih.gov/pubmed/23917901))

Occupational exposure is considered an urgent medical concern and should be managed immediately after possible exposure—the sooner the better; every hour counts. The CDC guidelines outline considerations in determining whether health care workers should receive PEP (antiretroviral medication taken after possible exposure to reduce the chance of infection with HIV) and in choosing the type of PEP regimen. For most HIV exposures that warrant PEP, a basic 4-week, two-drug regimen is recommended, starting as soon as possible after exposure (within 72 hours). For HIV exposures that pose an increased risk of transmission (based on the infection status of the source and the type of exposure), a three-drug regimen may be recommended. Special circumstances, such as a delayed exposure report, unknown source person, pregnancy in the exposed person, resistance of the source virus to antiretroviral agents, and toxicity of PEP regimens, are also discussed in the guidelines.

## Building Better Prevention Programs for Health Care Workers

Continued diligence in the following areas is needed to help reduce the risk of occupational HIV transmission to health care workers:

- **Administrative efforts.** All health care organizations should train health care workers in infection control procedures and the importance of reporting occupational exposures immediately after they occur. Organizations should develop and distribute written policies for the management of occupational exposures.
- **Development and promotion of safety devices.** Effective and competitively priced devices engineered to prevent sharps injuries should continue to be developed for health care workers who frequently come into contact with potentially HIV-infected blood. Proper and consistent use of such safety devices should be continuously evaluated.
- **Monitoring the effects of PEP.** Data on the safety and acceptability of different regimens of PEP, particularly regimens that include new antiretroviral agents, should be monitored and evaluated continuously. Furthermore, health professionals who administer PEP must communicate possible side effects before treatment starts and follow patients closely to make sure they take their medicine correctly.

All cases of suspected occupationally acquired HIV should be reported to state health department HIV surveillance staff and the CDC coordinator for “Cases of Public Health Importance” at 404-639-2050.

View the bibliography at [www.cdc.gov/hiv/workplace/occupational.html](http://www.cdc.gov/hiv/workplace/occupational.html)

### Additional Resources

#### CDC-INFO

1-800-CDC-INFO (232-4636)  
[www.cdc.gov/info](http://www.cdc.gov/info)

#### CDC HIV Website

[www.cdc.gov/hiv](http://www.cdc.gov/hiv)

#### CDC Act Against AIDS Campaign

[www.cdc.gov/actagainstaids](http://www.cdc.gov/actagainstaids)